

b This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

B<sup>1</sup> Claim 1 (currently amended): A process for preparing a homopolymer ~~and/or or~~ or copolymer having an irregular particle structure and a melt flow index (MFR 190/15) of from 1.3 g/10 min to 10 g/10 min, a molecular weight distribution  $M_w/M_n$  of from 3 to 30, a bulk density of from 0.05 g/cc to 0.4 g/cc and a particle size of from 5  $\mu\text{m}$  to 300  $\mu\text{m}$  by polymerization of the monomers using a mixed catalyst prepared by reacting a Ti(IV) compound with an organic aluminum compound at from 20°C to 50 °C in a suspension medium for from 0.5 minute to 60 minutes.

Claim 2 (currently amended): The process for preparing a homopolymer ~~and/or or~~ or copolymer having an irregular particle structure as claimed in claim 1, wherein the melt flow index (MFR 190/15) is from 1.3 g/10 min to 10 g/10 min, the molecular weight distribution  $M_w/M_n$  is from 3 to 10, the bulk density is from 0.1 g/cc to 0.4 g/cc and the particle size is from 20  $\mu\text{m}$  to 200  $\mu\text{m}$ .

Claim 3 (currently amended): The process for preparing a homopolymer ~~and/or or~~ or copolymer having an irregular particle structure as claimed in claim 1, wherein the melt flow index (MFR 190/15) is from 1.4 g/10 min to 5 g/10 min, the molecular weight distribution  $M_w/M_n$  is from 4 to 8, the bulk density is from 0.13 g/cc to 0.3 g/cc and the particle size is from 60  $\mu\text{m}$  to 180  $\mu\text{m}$ .

Claim 4 (currently amended): The process for preparing a homopolymer ~~and/or~~ or copolymer ~~having an irregular particle structure~~ as claimed in claim 1, wherein the melt flow index (MFR 190/15) is from 1.4 g/10 min to 3 g/10 min, the molecular weight distribution  $M_w/M_n$  is from 4 to 8, the bulk density is from 0.15 g/cc to 0.28 g/cc and the particle size is from 60  $\mu\text{m}$  to 160  $\mu\text{m}$ .

Claim 5 (currently amended): The process for preparing a homopolymer ~~and/or~~ or copolymer ~~having an irregular particle structure~~ as claimed in claim 1, wherein the polymerization is carried out at a temperature of from 30°C to 130°C and a pressure of from 0.05 MPa to 4 MPa.

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Claim 6 (currently amended): The process for preparing a homopolymer ~~and/or~~ or copolymer ~~having an irregular particle structure~~ as claimed in claim 1, wherein the polymerization is carried out at a temperature of from 50°C to 90°C.

Claim 7 (currently amended): The process for preparing an ethylene homopolymer ~~and/or~~ or copolymer ~~having an irregular particle structure~~ as claimed in ~~one or more of claims 1 to 6~~ claim 1, wherein the concentrations of the reactants in the starting solutions in the preparation of the mixed catalyst are from 0.1 mol to 9.1 mol of Ti(IV) compound/l of solvent and from 0.01 mol to 1 mol of Al compound/l.

Claim 8 (currently amended): The process for preparing a catalyst for preparing a homopolymer ~~and/or or~~ copolymer ~~having an irregular particle structure~~ as claimed in ~~one or more of claims 7 to 10~~ claim 9, wherein the reaction of the components is carried out by adding the Ti(IV) component to the Al component over a period of from 0.1 minute to 60 minutes.

Claim 9 (new): A process for preparing a catalyst for the preparation of a homopolymer or copolymer which comprises reacting a Ti(IV) compound with an aluminum compound at from -40°C to 50°C in a molar ratio of from 1:0.01 to 1:4 for from 0.5 minute to 60 minutes.

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Claim 10 (new): The process for preparing a catalyst for the preparation of a homopolymer or copolymer as claims in claim 9, wherein the aluminum component is added to a suspension medium in a ratio to the Ti component of Al:Ti = 1:1 - 30:1.

Claim 11 (new): The process for preparing a catalyst for preparing a homopolymer or copolymer as claimed in claim 9, wherein the reaction of the Ti(IV) compound with the organic aluminum compound is carried out in a saturated hydrocarbon or a mixture of saturated hydrocarbons at a temperature of from -40°C to 100°C.

Claim 12 (new): The process for preparing a catalyst for preparing a homopolymer or copolymer as claimed in claim 9, wherein the concentrations of the reactants in the

starting solutions are from 0.1 mol to 9.1 mol of Ti(IV) compound/l of solvent and 0.01 mol to 1 mol of Al compound/l.

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